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(*Thunnus maccoyi*) longline seabird incidental captures, 2002**

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EXECUTIVE SUMMARY

Baird, S.J.; Griggs, L.H. (2004). Estimation of within-season chartered southern bluefin tuna (*Thunnus maccoyii*) longline seabird incidental captures, 2002.

New Zealand Fisheries Assessment Report 2004/42. 15 p.

This report summarises the methods used and results given to the Ministry of Fisheries as part of Objective 2 of Project ENV2001/01: *Each year, to provide weekly within-season estimates (with confidence intervals) of total captures, deaths and releases – where possible by species – by area for seabirds taken in the southern bluefin tuna fishery beginning two weeks after the start of the 2001/02, 2002/03, 2003/04 fisheries until the end of the season.*

Four chartered Japanese vessels fished in the southern bluefin tuna (*Thunnus maccoyii*) longline fishery during March-June 2002 and completed 230 sets (715 447 hooks) in waters south of 40° S. All sets were observed and 92% of hooks were observed. Weekly captures were greatest between late April and late May when the vessels fished off the southwest coast of the South Island. Of the 76 seabirds observed caught, 25 were landed dead and another 36 were considered unlikely to survive after their release. All but one seabird were caught in Area 3 (off southwest coast of the South Island). One vessel accounted for 47% of the observed seabirds. Observers recorded captures representing 6 seabird species during the season; autopsy records from the 25 seabirds landed dead and returned suggested that 7 seabird species were represented. An estimated 83 seabirds (c.v. = 1.2%) were caught. Based on the observers' reports and the verified identifications for the dead birds, about 60 Buller's albatrosses (*Thalassarche bulleri*), 15 white-capped albatrosses (*T. steadi*), 1 southern royal albatross (*Diomedea epomophora*), 1 Salvin's albatross (*T. salvini*), 1 black-browed albatross (*T. melanophrys* or *T. impavida*), 4 white-chinned petrels (*Procellaria aequinoctialis*), and 1 Westland petrel (*P. westlandica*) were estimated caught. White-capped albatrosses were mostly landed dead, whereas Buller's albatrosses were usually released alive, either after being tangled or with hook injuries. The mean capture rate for Area 3 of 0.12 seabirds per 1000 hooks (s.e. = 0.02) was substantially greater than that observed for these vessels in recent years.

1. INTRODUCTION

The overlap of the areas fished and the foraging zones of the seabird species may result in the incidental capture of seabirds as they attempt to grab baits from the longline during setting or hauling. At present the chartered southern bluefin tuna (*Thunnus maccoyii*) fleet, which generally operates in southern waters, has a voluntary code of practice that places a limit on the number of captures of seabird species that are considered "at risk" by the Department of Conservation and Ministry of Fisheries (draft NPOA-Seabirds (Anon. 2000)). In the 2002 season these vessels were limited to a total catch of 85 "at-risk" seabirds (C. Hufflett, Solander Fisheries, pers. comm.). Within-season estimation of the numbers caught by these vessels supports the Ministry of Fisheries' responsibilities in the management of this fishery. Work undertaken annually by NIWA (for example, Doonan 2001) has shown that the use of within-season estimates of New Zealand sea lion captures (*Phocarctos hookeri*) in the southern squid (*Nototodarus* spp.) trawl fishery has provided a management tool for the Ministry of Fisheries to act within its responsibilities under the Fisheries Act (1996).

Ministry of Fisheries observer data from previous years have shown that area fished is an important factor in the bycatch of seabird species (Baird 2001, 2004a), and the chartered vessels have restricted their fishing areas in recent years to off the southeast and southwest coasts of the South Island (Fishery Management Areas 3, 5, and 7). Few of the "at-risk" seabird species appear in bycatch records from any fishery in these areas (Baird 2001, 2004a). In recent years, four or five chartered Japanese vessels have fished each season, with 100% observer coverage of vessels and over 80% coverage of 0.8–1 million hooks set each season (for example, Baird 2004a).

These vessels set about 3000 hooks per set on a longline (usually 8-strand multifilament or kuralon) about 130 km. The setting operation usually takes 5–6 hours, after which the line is left to soak for about 5 hours (Murray et al. 1999). The haul takes about 12 hours, and observers are required to watch as much of the haul as possible, within a 12-hour shift. The observers average out the number of hooks per minute of the haul and then estimate the number of unobserved hooks for the time the haul was not observed.

Seabirds may swallow the hook, become hooked in a body part, or tangled in the line. The number of seabirds observed caught by these vessels (either landed dead or released alive) has fluctuated in recent years and, of the seabirds reported, a higher proportion are released alive from being caught on the haul than in earlier years when most were landed dead from capture during setting. The number reported in 1998–99 (74 seabirds — 46% released alive) was half that reported in the previous year, and 40 seabirds were caught (65% released alive) in 1999–2000, and only 15 seabirds were reported in 2000–01 (20% released alive). The code of practice that these vessels operate under requires that every possible attempt is made to mitigate against seabird capture. The vessels set their lines at night and comply with tori line regulations. Usually more than one tori line is used in conjunction with mitigation methods such as sonic guns on the set and various structures such as hanging pendulums are used during the haul to create no-fly zones near the hauling point.

This report summarises the method and results of the within-season estimation of the total numbers of captures of seabird species (as identified by Ministry of Fisheries observers) from the chartered southern bluefin tuna fleet in 2002 and provides updated species identification from those landed dead and returned for autopsy (provided from Conservation Services Programme (CSP) autopsy project (Robertson et al. 2004)).

2. METHODS

2.1 Data

All vessels reported daily effort data to the fishing company and these were provided on a weekly basis. These data included:

- position data
- number of hooks per set

Ministry of Fisheries observers reported observed daily effort and seabird captures on a weekly basis. These data included:

- number of observed hooks per set
- number of each seabird species captured (as identified by the observer), including numbers landed dead and released alive. For those seabirds observed caught and released alive, observers also reported a "survival code" which is a measure based on how the seabird was caught. Thus any seabird caught alive and hooked in the following manner was assigned a code that suggested that the seabird may not survive:
 - hook swallowed or in the bill
 - hook penetrated any body parts, including flight feathers.

The data were checked for inconsistencies and entered into a single spreadsheet to amalgamate the two data sets. Set start position data were used to allocate each set to one of the four bird areas used in the analysis of tuna longline-seabird interactions (see Figure 1).

2.2 Within-season calculations

On receipt of the weekly data, the method described below was used to estimate the total number of captures of each seabird species from the observed portion of the effort (n_1) and the number captured per unobserved portion of the effort (n_2):

$$p = \frac{\sum k_i}{\sum h_{oi}} \quad n_1 = \sum k_i \quad n_2 = \sum h_{ui} p$$

where k_i is the number caught in set i , h_{oi} is the number of observed hooks in set i , and h_{ui} is the number of unobserved hooks in set i . The total number caught is

$$T_k = n_1 + n_2$$

To estimate $Var(T_k)$ and the 95% confidence intervals, the observed set data were reselected in a bootstrapping procedure (after Efron & Tibshirani 1993) to give a bootstrap capture rate p^* . Thus a bootstrap value for n_2 is given by

$$n_2^* = \sum h_{ui} p^*$$

For the total estimate of seabirds caught (for all areas and seabird species), the estimates were summed and the coefficient of variation was calculated as the square root of the sum of the bootstrap variances divided by the total estimate.

Weekly within-season estimates were submitted to the Chief Scientist, Ministry of Fisheries, within two working days of receipt of the within-season seabird capture data from the fishing company and the Ministry of Fisheries observers.

At the end of the season, those seabirds landed dead were returned to shore for autopsy and the identifications provided from this work were compared with those recorded by the Ministry of Fisheries observers during the within-season estimation period.

3. RESULTS

3.1 Summary of data received

Chartered Japanese longline vessels began fishing in Area 2 (Figure 1) in late March 2002 and completed targeting southern bluefin tuna in Area 3 in late June 2002 (Tables A1 & A2 in Appendix A). The four vessels completed 230 sets targeting southern bluefin tuna and two of these vessels completed another 4 sets targeting bigeye tuna (*Thunnus obesus*) in Area 4 in late June before they left the New Zealand Exclusive Economic Zone (Table A3 in Appendix A). Seabirds were observed caught on 22% of the sets in Areas 2 & 3 (Table 1). Seventy-six seabirds were observed caught and of the 51 (67%) that were released alive, 36 were assigned codes that indicated the seabirds might not survive (Table 2).

About 97% of the hooks set south of 40° S were in Area 3, which has been the main area of fishing in recent years. The first vessel to fish in this season set 30% of the hooks in Area 3 and caught 47% of the 75 seabirds reported from this area. Weekly captures on all vessels fluctuated in the first half of the season with between 8 and 12 seabirds caught per week for Weeks 6–10 inclusive. Captures then began to drop off, though the effort remained at similar levels to earlier weeks until Week 14 when vessels completed their southern bluefin fishing (Figure 2). Vessel D started fishing later in the season and caught fewer seabirds than the other vessels.

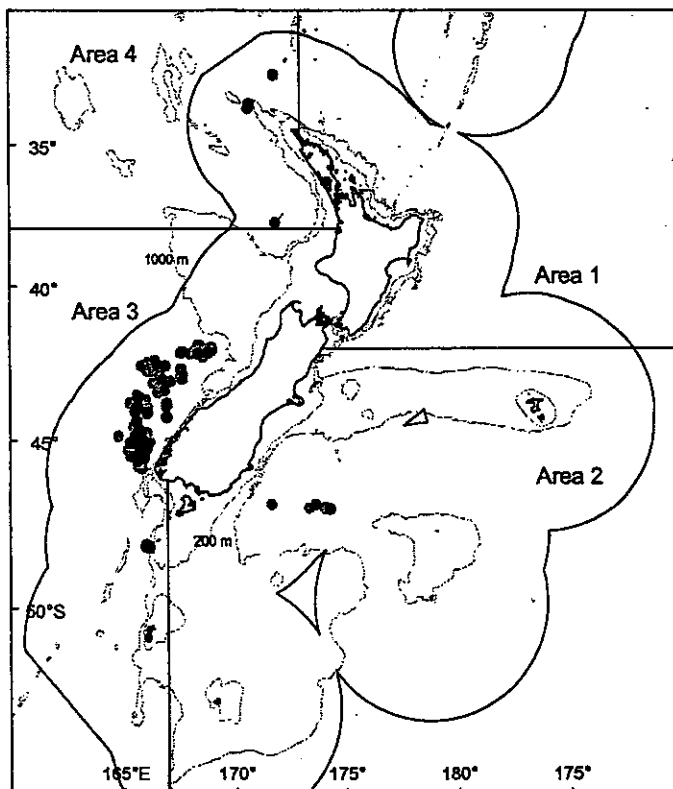


Figure 1: Set start positions of observed chartered tuna longline effort up to 23 June 2002 (●) ($n = 234$ sets), including those with observed seabird captures (◐).

Table 1: Frequency of seabird capture for chartered Japanese longline vessels in the 2002 southern bluefin tuna season (Areas 2 & 3).

| No. seabirds per set | Vessel A | Vessel B | Vessel C | Vessel D | All vessels |
|----------------------|----------|----------|----------|----------|-------------|
| 0 | 54 | 42 | 48 | 36 | 180 |
| 1 | 12 | 9 | 10 | 2 | 33 |
| 2 | 6 | 3 | 3 | 0 | 12 |
| 3 | 1 | 0 | 1 | 0 | 2 |
| 4 | 1 | 0 | 0 | 1 | 2 |
| 5 | 1 | 0 | 0 | 0 | 1 |
| % sets with seabirds | 28 | 22 | 29 | 8 | 22 |
| Total sets | 75 | 54 | 62 | 39 | 230 |
| Total seabirds | 36 | 15 | 19 | 6 | 76 |

Table 2: Within-season seabird species captures by vessel for Areas 2 and 3, including survival codes assigned by observers. Note that all dead bird identifications given here have been verified by autopsy and the two revisions of species identification are highlighted (see Section 3.3).

| Vessel | Observed no. hooks | Seabird species | Total birds | No. dead | No. alive | Survival codes* |
|---------------|--------------------|--------------------------------------|-------------|----------|-----------|----------------------|
| Area 2 | | | | | | |
| A | 21 319 | Salvin's albatross† | 1 | 1 | 0 | - |
| Area 3 | | | | | | |
| A | 196 859 | Buller's albatross | 18 | 4 | 14 | 7B 3C 2T |
| | | White-capped albatross | 12 | 9 | 3 | 1C 2T |
| | | Southern royal albatross | 1 | 1 | 0 | - |
| | | White-chinned petrel | 4 | 3 | 1 | 1C |
| B | 166 362 | Buller's albatross | 13 | 3 | 10 | 1B 2C |
| | | Unidentified black-browed albatross‡ | 1 | 0 | 1 | 1T (possibly C also) |
| | | Westland petrel§ | 1 | 1 | 0 | - |
| C | 155 401 | Buller's albatross | 18 | 0 | 18 | 8B 1B/C 6C 2T |
| | | White-capped albatross | 1 | 1 | 0 | - |
| D | 119 076 | Buller's albatross | 6 | 2 | 4 | 2B 1C 1T |

* Number for each survival code, as are defined by: B = hook swallowed or in bill; C = hook pierced body part, including flight feathers; D = hooked around body part or tangled. The survival of a seabird is considered unlikely if the seabird is classed as a "B" or "C".

† The observer identified this bird as a white-capped albatross.

‡ The observer thought this bird was either a black-browed albatross (*Thalassarche melanophrys*) or a Campbell albatross (*T. impavida*).

§ The observer identified this bird as a white-chinned petrel.

3.2 Verification of seabird species landed dead

Subsequently, the verification of the species identification indicated that two seabirds were misidentified by the observers and both represented species not recorded during the within-season reports: the one seabird from Week 2 in Area 2 recorded by the observer as a white-capped albatross was identified as a Salvin's albatross; and one recorded as a white-chinned petrel in Week 6 in Area 3 was identified as a Westland petrel (see Table 2).

3.3 Within-season estimates of total numbers caught

As part of the reporting requirements, two sets of estimates were provided to the Ministry of Fisheries on a weekly basis: one of the estimated total numbers of captures of each species during the season and one of the estimated total deaths of each species during the season (based on the actual numbers of birds recorded as “dead birds” by observers). The final within-season total estimates by species are given in Table 3. Estimates provided are based on observed records of species identification and on autopsy records (Robertson et al. 2004). These estimates assume that all those birds that were released alive were identified correctly. Table 4 gives the estimates based on the numbers of seabirds landed dead.

An estimated 83 seabirds were caught (c.v. = 1.2%) (see Table A3 in Appendix A), with Buller’s albatrosses accounting for about 60 captures (Table 3). The species verification for those seabirds landed dead resulted in two further seabird species represented in the catch. These species were each represented by a single bird and thus, other than increasing the number of species in the catch composition, there was little effect on the overall estimated species numbers, assuming that the identifications of the seabirds released alive were correct.

The mean capture rate for observed hooks in Area 3 was 0.12 seabirds per 1000 hooks (s.e. = 0.02), which is substantially higher than comparable means reported for the previous two seasons (0.033 seabirds per 1000 hooks in 2000 (Baird 2004a) and 0.026 seabirds per 1000 hooks (s.e. = 0.008) in 2001 (Baird 2004b)).

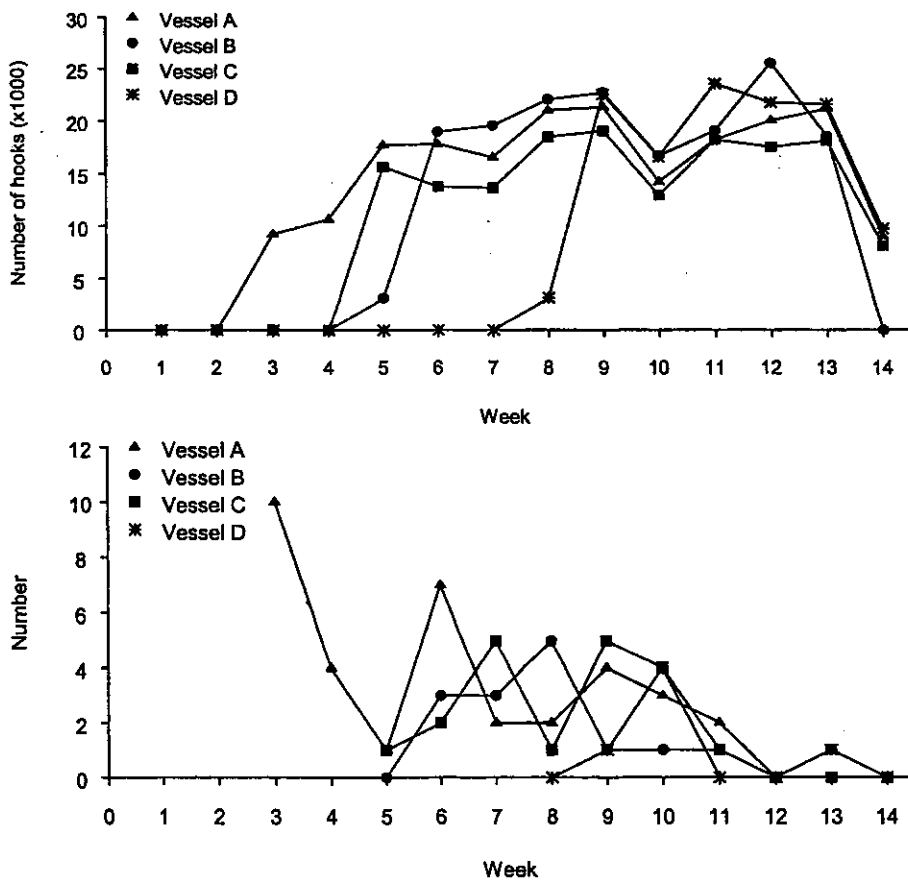


Figure 2: Number of observed hooks and seabird captures in Area 3 for each vessel, by week, where Week 1 starts 18 March and Week 14 ends 23 June 2002.

Table 3: Numbers of seabirds observed caught (and verified species numbers given in parentheses), estimated total numbers of seabird species captured during the 2002 chartered fishing effort for southern bluefin tuna in Areas 2 & 3. Two estimates are given for each species: one based on the observer identification as provided for the within-season work and one based on the verified species information as provided post-season.

| Seabird species | Numbers observed caught (corrections)* | Total (95% confidence intervals) from observed records | Revised total (95% confidence intervals) with verified identification |
|---------------------------------------|--|--|---|
| Area 2 | | | |
| White-capped albatross | 1 (0) | 1.04 (1–1.12) | 0 |
| Salvin's albatross | 0 (1) | 0 | 1.04 (1–1.12) |
| Area 3 | | | |
| Black-browed albatross (unidentified) | 1 | 1.1 (1–1.4) | 0 |
| Buller's albatross | 55 | 59.8 (58.3–61.3) | 59.8 (58.3–61.3) |
| Southern royal albatross | 1 | 1.1 (1–1.4) | 1.1 (1–1.4) |
| White-capped albatross | 13 | 14.1(13.4–15.1) | 14.1(13.4–15.1) |
| White-chinned petrel | 5 (4) | 5.4 (5.1–5.9) | 4.4 (4.1–4.7) |
| Westland Petrel | 0 (1) | 0 | 1.04 (1–1.12) |

* Note that autopsy identification resulted in: one Salvin's albatross rather than white-capped albatross in Area 2; black-browed albatross verified; and one Westland petrel rather than one white-chinned petrel.

Table 4: Numbers of seabirds landed dead (and verified species numbers given in parentheses), estimated total numbers of deaths of seabird species during the 2002 chartered fishing effort for southern bluefin tuna in Areas 2 & 3. Note that these estimates are based on those observed captures reported as "dead birds" by observers. Two estimates are given for each species: one based on the observer identification as provided for the within-season work and one based on the verified species information as provided post-season.

| Seabird species | Numbers landed dead (corrections)* | Total deaths (95% confidence intervals) from observed records | Revised total deaths (95% confidence intervals) with verified identification |
|---------------------------------------|------------------------------------|---|--|
| Area 2 | | | |
| White-capped albatross | 1 (0) | 1.04 (1–1.12) | 0 |
| Salvin's albatross | 0 (1) | 0 | 1.04 (1–1.12) |
| Area 3 | | | |
| Black-browed albatross (unidentified) | 1 | 1.1 (1–1.4) | 0 |
| Buller's albatross | 9 | 9.8 (9.2–10.6) | 9.8 (9.2–10.6) |
| Southern royal albatross | 1 | 1.1 (1–1.4) | 1.1 (1–1.4) |
| White-capped albatross | 10 | 10.9 (10.3–11.7) | 10.9 (10.3–11.7) |
| White-chinned petrel | 4 (3) | 4.3 (4.0–4.7) | 3.3 (3–3.6) |
| Westland Petrel | 0 (1) | 0 | 1.04 (1–1.12) |

* Note that autopsy identification resulted in: one Salvin's albatross rather than white-capped albatross in Area 2; black-browed albatross verified; and one Westland petrel rather than one white-chinned petrel.

3.4 Within-season data from one domestic vessel in southern waters

The fishing company also sent weekly faxes during the southern bluefin tuna season summarising effort by two large domestic vessels fishing in Areas 2 & 3. These data are summarised in Appendix B. There was little observer coverage of these vessels. An observer

reported four captures (all recorded as Buller's albatross). Data reported by the skippers, suggested that more seabirds were caught during the middle of the season, as occurred with the chartered vessels. Towards the end of the season, vessels targeted southern bluefin tuna further north up the west coast of the South Island in more northern waters, where in past years the seabird capture rates have been lower. Observers have previously noted that fewer seabirds are seen around the vessels when the vessels move away from the lower west coast waters off Fiordland.

4. DISCUSSION

The few discrepancies in species identification shown by the autopsy work suggest that observers may have difficulty in identifying some seabird species. However, if there are photographs of the seabirds released alive, then it may be possible to verify the observer records for those seabirds.

Verification of the observed and total effort data will be carried out in the next fishing year, once the data have been received. It is likely there will be few differences because of the high number of hooks observed on each of the vessels. Further, the vessels supplied the effort data used here.

Given that there were differences in the numbers caught by each vessel, the method used to determine the estimated number of seabirds caught could be biased depending on the representativeness of the effort in any one week. Since all sets were observed, and 92% of hooks were observed, this is not a concern for these data. However, these vessels are all required to report their seabird captures to the fishing company, and if a seabird is caught when the observer is on a break, this bird may later be handed to the observer and reported as observed. It is not evident that this occurred in this season, and the number of seabirds reported to the fishing company each week was the same as the number reported by observers.

5. RECOMMENDATIONS

We would like to recommend the following for consideration before the start of the 2003 southern bluefin tuna season.

1. Add another code for observers to account for tangled birds.
2. Ensure that there is an agreed standardised method for estimating the number of unobserved hooks. At present, there may be different interpretations by observers on the estimation of the number of hooks actually observed, and this may therefore lead to inconsistencies.
3. Ensure that there is an agreed procedure with the reporting by observers of those seabirds unobserved (that is, seabirds landed when the observer was not present). This occurrence provides a potential difficulty for any extrapolation to the total number of hooks.
4. Ensure that verification of seabird identification can be made available (even in draft form) before the completion requirements for that CSP project, so that the observers' identifications can be verified within the reporting timeframe of this project. Photographs would be required, to verify the species reported for those seabirds released alive.

6. ACKNOWLEDGMENTS

We are grateful to the Ministry of Fisheries observers for their diligence and effort in completing the weekly reports on time and to Solander Fisheries for their timely provision of fishing effort data. This work was completed under the Ministry of Fisheries project ENV2001/01, Objective 2.

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Appendix A: Within-season weekly data summaries, by area

Table A1: Summary of weekly fishing company and Ministry of Fisheries observer programme data, Area 2.
 [Note there was no fishing in this area after Week 4.]

| | | Week* | | | | | Total |
|-------------------------|-------|-------|--------|-------|-------|------|--------|
| | | 1 | 2 | 3 | 4 | 5-14 | |
| No. vessels | | 1 | 1 | 1 | 1 | 0 | 1 |
| Total sets | | 1 | 4 | 1 | 1 | — | 7 |
| Total hooks | | 3 100 | 12 800 | 3 035 | 3 100 | — | 22 200 |
| % hooks observed | | 96 | 95 | 98 | 96 | — | 96 |
| Seabird captures | | | | | | | |
| White-capped albatross | Total | 0 | 1 | 0 | 0 | — | 1 |
| | Dead | — | 1 | 0 | 0 | — | 1 |

* Fishing in Week 1 began on 24 March 2002.

Appendix A – continued

Table A2: Summary of weekly fishing company and Ministry of Fisheries observer programme data, Area 3.

| | Week* | | | | | | | | | | | | | | Total |
|--------------------------|-------|---|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14† | |
| No. vessels | 0 | 0 | 1 | 1 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Total sets | – | – | 3 | 4 | 13 | 18 | 19 | 22 | 28 | 23 | 28 | 29 | 27 | 9 | 223 |
| Total hooks | – | – | 9 500 | 11 100 | 40 020 | 54 380 | 53 733 | 69 418 | 92 240 | 65 270 | 88 903 | 91 983 | 86 570 | 30 130 | 727 453 |
| % hooks observed | – | – | 97 | 96 | 91 | 93 | 92 | 93 | 93 | 93 | 88 | 92 | 92 | 89 | 92 |
| Seabird captures‡ | | | | | | | | | | | | | | | |
| XWM | Total | | 7 | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 14 |
| | Dead | | 7 | 0 | – | 1 | 1 | 1 | – | 1 | 1 | – | – | – | 11 |
| XWC | Total | | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| | Dead | | 2 | 0 | – | 1 | – | – | – | – | – | – | – | – | 3 |
| XRA | Total | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Dead | | 1 | 0 | – | – | – | – | – | – | – | – | – | – | 1 |
| XBM | Total | | 0 | 2 | 2 | 10 | 8 | 7 | 11 | 11 | 3 | 0 | 1 | 0 | 55 |
| | Dead | | – | 0 | 0 | 5 | 0 | 1 | 0 | 2 | 1 | – | 0 | 0 | 9 |
| XSM | Total | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| | Dead | | – | – | – | – | – | – | – | – | – | – | – | – | 0 |

* Fishing began in Week 1 on 24 March 2002, though effort took place only in Area 2 in Week 1.

† Two vessels each completed 2 sets in Area 4, where about 97% of the 12 006 hooks were observed. No seabirds were observed caught.

‡ XWM = white-capped albatross; XWC = white-chinned petrel; XRA = southern royal albatross; XBM = Buller's albatross; XSM = black-browed albatross. "Dead" birds are those that were landed dead.

Appendix A – continued

Table A3: Summary statistics for chartered Japanese longline vessels in the 2002 southern bluefin tuna season*

| | |
|-------------------------------------|---|
| Total number of vessels in fishery: | 4 |
| Total number of sets: | 230 |
| % sets observed: | 100 |
| Total number of hooks: | 715 447 |
| % hooks observed: | 92 |
| Total number seabirds observed: | 76 |
| Total number dead seabirds: | 25 |
| Total number alive seabirds: | 51 [“survival” codes recorded by observers indicate that 36 birds may not survive] |
| Estimated total seabirds caught: | 83 (c.v. = 1.2%) |
| Species observed caught: | black-browed albatross (1), Buller’s albatross (55), southern royal albatross (1), white-capped albatross (15), white-chinned petrels (4) |
| Seabirds in Area 2: | 1 observed capture: mean capture rate of 0.047 seabirds per 1000 hooks (s.e. = 0.047). |
| Seabirds in Area 3: | 75 observed captures: mean capture rate of 0.12 per 1000 hooks (s.e. = 0.02). |

* Two vessels set a total of 4 sets (12 006 hooks) targeting bigeye tuna in Area 4 in late June. No seabirds were observed caught

Appendix B: Total and observed effort from two domestic fishing vessels in Areas 2 & 3

Table B1: Summary of weekly fishing company and Ministry of Fisheries observer programme data, Areas 2 & 3

| | Week | | | | | | | | | | | | | | Total |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | |
| Area 2 | | | | | | | | | | | | | | | |
| No. vessels | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| No. sets | 6 | 6 | - | - | - | - | - | - | - | - | - | - | - | - | 12 |
| Total hooks | 17 254 | 15 460 | - | - | - | - | - | - | - | - | - | - | - | - | 32 714 |
| % sets observed | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - | - | 0 |
| Observed hooks | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0 |
| Observed birds | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0 |
| Reported birds | 0 | 5 | - | - | - | - | - | - | - | - | - | - | - | - | 5 |
| Area 3 | | | | | | | | | | | | | | | |
| No. vessels | 0 | 0 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| No. sets | - | - | 7 | 7 | 13 | 11 | 7 | 6 | 7 | 11 | 13 | 13 | 13 | 6 | 114 |
| Total hooks | - | - | 20 290 | 19 750 | 30 650 | 27 215 | 20 435 | 17 200 | 21 700 | 21 650 | 29 200 | 29 100 | 31 800 | 13 100 | 282 090 |
| % sets observed | - | - | 0 | 0 | 0 | 0 | 0 | 50 | 100 | 64 | 54 | 54 | 54 | 50 | 40 |
| Observed hooks | - | - | - | - | - | - | 6 900 | 16 430 | 12 408 | 12 408 | 16 836 | 18 494 | 22 700 | 9 900 | 103 668 |
| Observed birds | - | - | - | - | - | - | 1 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 4 |
| Reported birds† | - | - | 0 | 0 | 0 | 5 | 1 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 11 |

* In Week 4 another vessel made 2 sets in the northern part of Area 3, but no hook numbers were available.

† In Week 8 the observer reported that 1 Buller's albatross was observed caught and released alive, but was coded as unlikely to survive. In Week 10 1 Buller's albatross was released alive, but no survival code was given. In Week 12, 2 Buller's albatrosses were released alive: one was coded as unlikely to survive and the other was not given a survival code.

‡ Reported birds are those reported by the vessels rather than observers.